

**Amendment of the Abstract**

Please substitute the new Abstract of the Disclosure submitted herewith on a separate page for the original Abstract presently in the application.

## ABSTRACT OF THE DISCLOSURE

A method and apparatus for coating a workpiece is disclosed. A material is applied to the workpiece by thermal spray coating. The spraying process is monitored on-line by detecting properties of the particles in the spray jet and supplying them as actual values, where the actual values are compared directly with target values, or characteristic quantities derived from the actual values are compared with the target values and, when a deviation is found between the actual values or characteristic quantities and the pre-specified target values, the process parameters for thermal spray coating are automatically adjusted by a regulator on the basis of a neuronal network.